

## **REMARKS**

In response to the Office Action mailed November 16, 2005, Applicant has amended the application as above. No new matter is added by the amendments as discussed below. Applicant respectfully requests the entry of the amendments and reconsideration of the application in view of the amendments and the remarks set forth below.

### **Discussion of Claim Amendments**

Claims 9-11, 14 and 17 have been amended. Claims 24-27 have been added. Upon the entry of the amendments, Claims 1-27 are pending in this application. The amendments to Claim 11 are supported, for example, by the specification at paragraphs [0053] and [0058], and Figure 5. The amendments to Claim 9-10 and 17 are merely for clarification and do not narrow the scope of protection. New Claims 24-27 are supported, for example, by the specification at paragraph [0032] and Figure 2. Thus, the amendments to the claims do not introduce any new matter. Entry of the amendments is respectfully requested.

### **Discussion of Rejection of Claims under 35 U.S.C. § 102(e)**

Claims 1, 7, 11-12, 18 and 23 were rejected under 35 U.S.C. § 102(e) as being anticipated by Minnick et, al (U.S. Patent No. 6,950,658). Applicant respectfully submits that the rejected claims are allowable over Minnick as discussed below.

### **Rationale of 35 U.S.C. § 102**

“For a prior art reference to anticipate a claim under 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference.” *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 677, 7 USPQ 2d 1315, 1317 (Fed. Cir. 1988).

### **Discussion of Patentability of Independent Claims 1, 18 and 23**

Independent Claim 1 recites, among other things, i) determining, *at the access node*, an

overloaded channel from the plurality of channels and ii) transferring, *at the access node*, a load from the overloaded channel to a less loaded channel of the plurality of channels. Each of Claims 18 and 23 includes similar features. Minnick does not disclose the above-indicated features of the claimed invention as discussed below.

Minnick discloses that tower sites (170, 190), arguably corresponding to the claimed access node, wirelessly communicate data with mobile terminals (110) via channels. *See Figure 1 of Minnick*. Furthermore, a multichannel controller (MCC; 130) determines an overloaded channel and performs load balancing based on the information (such as channel loading or message statistics) that the tower sites (170, 190) have provided. *See column 10, lines 44-46 and column 13, lines 1-4*. That is, in Minnick, neither of the tower sites (170, 190) determines an overloaded channel from the plurality of channels. Furthermore, neither of the tower sites (170, 190) transfers a load from the overloaded channel to a less loaded channel of the plurality of channels. Thus, Applicant respectfully submits that Minnick does not disclose or teach the above-indicated features of the claimed invention.

In one embodiment of the claimed invention, the access node acts as a local and centralized server which makes its own decision on load balancing, and thus one embodiment of the claimed invention does not require extra hardware equipment such as a wireless switch, or an external server, or additional software such as management software. *See, for example, paragraph [0027]*. In contrast, the Minnick system is required to have additional hardware such as the MCC (130) since each tower site (170, 190) does not locally perform load balancing. In view of the above, independent Claims 1, 18 and 23 are allowable over Minnick.

#### Discussion of Patentability of Independent Claim 11

Independent Claim 11, as amended, recites, among other things, a control module configured to *select a link from a plurality of links* in the overloaded channel and *transfer the selected link* to a less loaded channel of the plurality of channels. Applicant respectfully submits that there is no disclosure in Minnick that the multichannel controller (130) selects a link from a plurality of links in the overloaded channel and transfers the selected link to a less loaded

channel. As discussed above, in Minnick, the multichannel controller (130) determines an overloaded channel and performs load balancing on the overloaded channel. *See column 10, lines 44-46 and column 13, lines 1-4.* In view of the above, Applicant respectfully submits that independent Claim 11 is allowable over Minnick.

#### Discussion of Patentability of Dependent Claims

Claims 7 and 12 depend from base Claim 1 or 11, and further define additional technical features of the present invention. In view of the patentability of their base claims, and in further view of their additional technical features, Applicant respectfully submits that the dependent claims are patentable over Minnick.

#### Discussion of Claim Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected Claims 2-6, 9-10, 14-17 and 19-22 under 35 U.S.C. § 103 (a) as being unpatentable over Minnick in view of Frank (U.S. Publication No. 2004/0052226). The Examiner has also rejected Claim 8 under 35 U.S.C. § 103 (a) as being unpatentable over Minnick in view of Razavilar (U.S. Publication No. 2003/0181211). The Examiner has further rejected Claim 13 under 35 U.S.C. § 103 (a) as being unpatentable over Minnick in view of Gandhi (U.S. Publication No. 2005/0026624). Applicant respectfully submits that the rejected claims are allowable over the prior art of record as discussed below.

#### Standard of *Prima facie* Obviousness

In order to provide a *prima facie* showing of obviousness under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the prior art. *See, e.g., In re Royka*, 490 F. 2d 981, 180 U.S.P.Q. 580 (CCPA 1974); MPEP 2143.03.

Discussion of Patentability of Independent Claims 9, 10 and 17

Independent Claim 9 recites, among other things, *selecting a link from a plurality of links* in the overloaded channel and *transferring the selected link* to a less loaded channel of the plurality of channels. Each of Claims 10 and 17 includes similar features. As discussed above with regard to patentability of Claim 11, Minnick does not teach the above-indicated features of the claimed invention.

The Examiner asserts that Minnick teaches “selecting a link from the overloaded Channel,” citing Figure 5, column 6, lines 41-44, column 9, line 63-column 10, line 19, column 11, lines 4-13 and lines 56-62 and column 12, lines 7-35 of Minnick. *See the Office Action at page 5, first paragraph.* Applicant respectfully disagrees. Those cited portions of Minnick merely and arguably disclose “selecting an overloaded channel from a plurality of channels.” Applicant respectfully submits that they do not provide evidence of “selecting a link from a plurality of links in the overloaded channel” recited in Claims 9, 10 and 17.

The Examiner acknowledged that Minnick does not teach “transferring the selected link to a less loaded channel of the plurality of channels.” *See the Office Action at page 5, second paragraph.* However, the Examiner further asserts that Frank teaches “selecting a link from the overloaded channel,” citing paragraphs [0085]-[0088] of Frank. *See the Office Action at page 6, second paragraph.* Applicant respectfully disagrees. Those cited paragraphs of Frank merely disclose that a load balancing manager determines information for load balancing and provides the determined information to access points (312-320) and access devices (322-338). *See paragraph [0086] and Figure 3.* Applicant respectfully submits that they do not provide evidence of “transferring the selected link to a less loaded channel of the plurality of channels” recited in Claims 9, 10 and 17. In view of the above, Applicant respectfully submits that independent Claims 9, 10 and 17 are allowable over Minnick and Frank.

Discussion of Patentability of Claims 8 and 13

Claims 8 and 13 depend from base Claim 1 or 11, and further define additional technical features of the present invention. Razavilar discloses that an access point (AP1, AP2) selects a channel, which has least interference, among available channels based on received signal strength

indication (RSSI) measurements. *See paragraphs [0042] and [0045].* Gandhi discloses that a base station performs a faster or slower control of a channel traffic based on the load of the channel. *See paragraphs [0042] and [0044].* Neither Razavilar nor Gandhi discloses load balancing. Thus, neither of Razavilar and Gandhi remedies the deficiency of Minnick. Furthermore, since Razavilar does not teach load balancing, the prior reference cannot, and does not, teach that each access node performs the determining and transferring independently from each other recited in Claim 8. In view of the patentability of base claim 1, and in further view of the additional technical features, Applicant respectfully submits that Claim 8 is patentable over the prior art references. Furthermore, since at least base Claim 11 is patentable over Minnick, Applicant respectfully submits that Claim 13 is patentable over the prior art references.

#### Discussion of Patentability of Dependent Claims

Claims 2-6, 14-16 and 19-22 depend from base Claim 1, 11 or 18, and further define additional technical features of the present invention. In view of the patentability of their base claims, and in further view of their additional technical features, Applicant respectfully submits that the dependent claims are patentable over the prior art of record.

#### Discussion of Patentability of New Claims

Each of new Claims 24-27 includes all of the limitations of Claim 1, 10-11 and 17, respectively, and further includes that each channel includes a plurality of links. In view of the patentability of their base claims, and in further view of their added features, Applicant respectfully submits that the new claims are patentable over the prior art of record.

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CONCLUSION

In view of Applicant's foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Respectfully submitted,

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